ENTERED

RAW SEQUENCE LISTING   DATE: 11/06/2002
PATENT APPLICATION: US/09/990,102A   TIME: 10:22:44

Input Set : D:\SEQLIST.txt
Output Set: N:\CRF4\11062002\I990102A.raw

```
 4 <110> APPLICANT: Haussler, David
 5       Winters-Hilt, Stephen
 6       Akeson, Mark
 7       Vercoutere, Wenonah
11 <120> TITLE OF INVENTION: Methods and Devices for Characterizing
12       Duplex Nucleic Acid Molecules
15 <130> FILE REFERENCE: UCAL199
17 <140> CURRENT APPLICATION NUMBER: 09/990,102A
18 <141> CURRENT FILING DATE: 2001-11-21
20 <150> PRIOR APPLICATION NUMBER: 60/253,393
21 <151> PRIOR FILING DATE: 2000-11-27
23 <160> NUMBER OF SEQ ID NOS: 22
25 <170> SOFTWARE: FastSEQ for Windows Version 4.0
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 10
29 <212> TYPE: DNA
30 <213> ORGANISM: Artificial Sequence
32 <220> FEATURE:
33 <223> OTHER INFORMATION: Synthetic oligonucleotide
35 <400> SEQUENCE: 1
36 ccgttttcgg                                                   10
38 <210> SEQ ID NO: 2
39 <211> LENGTH: 12
40 <212> TYPE: DNA
41 <213> ORGANISM: Artificial Sequence
43 <220> FEATURE:
44 <223> OTHER INFORMATION: Synthetic oligonucleotide
46 <400> SEQUENCE: 2
47 cacgttttcg tg                                                12
49 <210> SEQ ID NO: 3
50 <211> LENGTH: 14
51 <212> TYPE: DNA
52 <213> ORGANISM: Artificial Sequence
54 <220> FEATURE:
55 <223> OTHER INFORMATION: Synthetic oligonucleotide
57 <400> SEQUENCE: 3
58 gaacgttttc gttc                                              14
60 <210> SEQ ID NO: 4
61 <211> LENGTH: 16
62 <212> TYPE: DNA
63 <213> ORGANISM: Artificial Sequence
65 <220> FEATURE:
66 <223> OTHER INFORMATION: Synthetic oligonucleotide
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68 <400> SEQUENCE: 4
69 cgaacgtttt cgttcg                                        16
71 <210> SEQ ID NO: 5
72 <211> LENGTH: 18
73 <212> TYPE: DNA
74 <213> ORGANISM: Artificial Sequence
76 <220> FEATURE:
77 <223> OTHER INFORMATION: Synthetic oligonucleotide
79 <400> SEQUENCE: 5
80 ctgaacgttt tcgttcag                                      18
82 <210> SEQ ID NO: 6
83 <211> LENGTH: 20
84 <212> TYPE: DNA
85 <213> ORGANISM: Artificial Sequence
87 <220> FEATURE:
88 <223> OTHER INFORMATION: Synthetic oligonucleotide
90 <400> SEQUENCE: 6
91 ctcgaacgtt ttcgttcgag                                    20
93 <210> SEQ ID NO: 7
94 <211> LENGTH: 22
95 <212> TYPE: DNA
96 <213> ORGANISM: Artificial Sequence
98 <220> FEATURE:
99 <223> OTHER INFORMATION: Synthetic oligonucleotide
101 <400> SEQUENCE: 7
102 cttcgaacgt tttcgttcga ag                                22
104 <210> SEQ ID NO: 8
105 <211> LENGTH: 13
106 <212> TYPE: DNA
107 <213> ORGANISM: Artificial Sequence
109 <220> FEATURE:
110 <223> OTHER INFORMATION: Synthetic oligonucleotide
112 <400> SEQUENCE: 8
113 caacgtttcg ttg                                          13
115 <210> SEQ ID NO: 9
116 <211> LENGTH: 16
117 <212> TYPE: DNA
118 <213> ORGANISM: Artificial Sequence
120 <220> FEATURE:
121 <223> OTHER INFORMATION: Synthetic oligonucleotide
123 <400> SEQUENCE: 9
124 cgaacgtttt cgtacg                                       16
126 <210> SEQ ID NO: 10
127 <211> LENGTH: 19
128 <212> TYPE: DNA
129 <213> ORGANISM: Artificial Sequence
131 <220> FEATURE:
132 <223> OTHER INFORMATION: Synthetic oligonucleotide
134 <400> SEQUENCE: 10
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135 tctgaacgtt ttcgttcag                                        19
137 <210> SEQ ID NO: 11
138 <211> LENGTH: 28
139 <212> TYPE: DNA
140 <213> ORGANISM: Artificial Sequence
142 <220> FEATURE:
143 <223> OTHER INFORMATION: Synthetic oligonucleotide
145 <400> SEQUENCE: 11
146 gaacgttttc gttcgaacgt tttcgttc                              28
148 <210> SEQ ID NO: 12
149 <211> LENGTH: 22
150 <212> TYPE: DNA
151 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Synthetic oligonucleotide
156 <400> SEQUENCE: 12
157 gttcgaacgt tttcgttcga ac                                    22
159 <210> SEQ ID NO: 13
160 <211> LENGTH: 22
161 <212> TYPE: DNA
162 <213> ORGANISM: Artificial Sequence
164 <220> FEATURE:
165 <223> OTHER INFORMATION: Synthetic oligonucleotide
167 <400> SEQUENCE: 13
168 cttcgaacgt tttcgttcga ag                                    22
170 <210> SEQ ID NO: 14
171 <211> LENGTH: 22
172 <212> TYPE: DNA
173 <213> ORGANISM: Artificial Sequence
175 <220> FEATURE:
176 <223> OTHER INFORMATION: Synthetic oligonucleotide
178 <400> SEQUENCE: 14
179 attcgaacgt tttcgttcga at                                    22
181 <210> SEQ ID NO: 15
182 <211> LENGTH: 22
183 <212> TYPE: DNA
184 <213> ORGANISM: Artificial Sequence
186 <220> FEATURE:
187 <223> OTHER INFORMATION: Synthetic oligonucleotide
189 <400> SEQUENCE: 15
190 tttcgaacgt tttcgttcga aa                                    22
192 <210> SEQ ID NO: 16
193 <211> LENGTH: 22
194 <212> TYPE: DNA
195 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: Synthetic oligonucleotide
200 <400> SEQUENCE: 16
201 tttcgaacgt tttcgttcga ag                                    22
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PATENT APPLICATION: US/09/990,102A   TIME: 10:22:44

Input Set : **D:\SEQLIST.txt**
Output Set: **N:\CRF4\11062002\I990102A.raw**

```
203 <210> SEQ ID NO: 17
204 <211> LENGTH: 22
205 <212> TYPE: DNA
206 <213> ORGANISM: Artificial Sequence
208 <220> FEATURE:
209 <223> OTHER INFORMATION: Synthetic oligonucleotide
211 <400> SEQUENCE: 17
212 tttcgaacgt tttcgttcga at                                       22
214 <210> SEQ ID NO: 18
215 <211> LENGTH: 22
216 <212> TYPE: DNA
217 <213> ORGANISM: Artificial Sequence
219 <220> FEATURE:
220 <223> OTHER INFORMATION: Synthetic oligonucleotide
```
W--> 222 **<221> NAME/KEY: modified_base**
```
223 <222> LOCATION: (1)...(1)
224 <223> OTHER INFORMATION: N is difluorotoluene
```
W--> 226 **<400> 18**
W--> 227 **nttcgaacgt tttcgttcga aa**   22
```
229 <210> SEQ ID NO: 19
230 <211> LENGTH: 22
231 <212> TYPE: DNA
232 <213> ORGANISM: Artificial Sequence
234 <220> FEATURE:
235 <223> OTHER INFORMATION: Synthetic oligonucleotide
237 <400> SEQUENCE: 19
238 gatcgaacgt tttcgttcga tc                                       22
240 <210> SEQ ID NO: 20
241 <211> LENGTH: 22
242 <212> TYPE: DNA
243 <213> ORGANISM: Artificial Sequence
245 <220> FEATURE:
246 <223> OTHER INFORMATION: Synthetic oligonucleotide
248 <400> SEQUENCE: 20
249 catcgaacgt tttcgttcga tg                                       22
251 <210> SEQ ID NO: 21
252 <211> LENGTH: 22
253 <212> TYPE: DNA
254 <213> ORGANISM: Artificial Sequence
256 <220> FEATURE:
257 <223> OTHER INFORMATION: Synthetic oligonucleotide
259 <400> SEQUENCE: 21
260 aatcgaacgt tttcgttcga tt                                       22
262 <210> SEQ ID NO: 22
263 <211> LENGTH: 22
264 <212> TYPE: DNA
265 <213> ORGANISM: Artificial Sequence
267 <220> FEATURE:
268 <223> OTHER INFORMATION: Synthetic oligonucleotide
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/990,102A

DATE: 11/06/2002
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Input Set : D:\SEQLIST.txt
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270 <400> SEQUENCE: 22
271 tatcgaacgt tttcgttcga ta   22

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 11/06/2002
PATENT APPLICATION: US/09/990,102A   TIME: 10:22:45

Input Set : D:\SEQLIST.txt
Output Set: N:\CRF4\11062002\I990102A.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:18; N Pos. 1

VERIFICATION SUMMARY   DATE: 11/06/2002
PATENT APPLICATION: US/09/990,102A   TIME: 10:22:45

Input Set : D:\SEQLIST.txt
Output Set: N:\CRF4\11062002\I990102A.raw

L:222 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:226 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:227 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0